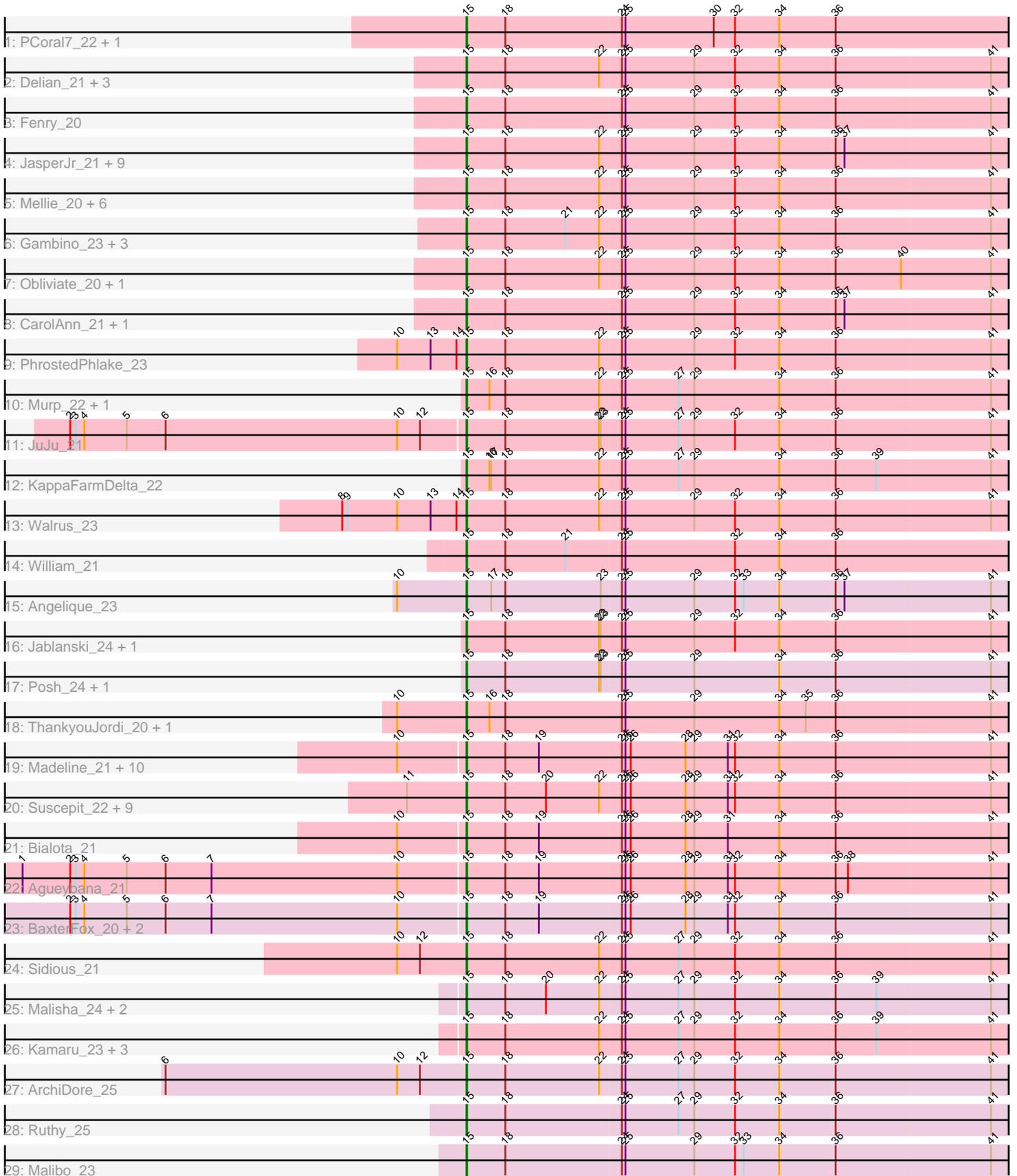


Pham 291078



Note: Tracks are now grouped by subcluster and scaled. Switching in subcluster is indicated by changes in track color. Track scale is now set by default to display the region 30 bp upstream of start 1 to 30 bp downstream of the last possible start. If this default region is judged to be packed too tightly with annotated starts, the track will be further scaled to only show that region of the ORF with annotated starts. This action will be indicated by adding "Zoomed" to the title. For starts, yellow indicates the location of called starts comprised solely of Glimmer/GeneMark auto-annotations, green indicates the location of called starts with at least 1 manual gene annotation.

Pham 291078 Report

This analysis was run 03/28/26 on database version 641.

Pham number 291078 has 83 members, 5 are drafts.

Phages represented in each track:

- Track 1 : PCoral7_22, Toast_22
- Track 2 : Delian_21, UmaThurman_21, Wisp_20, CaptainKirk2_21
- Track 3 : Fenry_20
- Track 4 : JasperJr_21, Melba_21, Zarbodnamra_21, Zilla_21, Archis_22, Barco_21, Utz_21, BlingBling_21, MintFen_21, Guacamole_21
- Track 5 : Mellie_20, Jalammah_23, Frokostdame_21, Pipp_21, Hitter_21, Samba_21, Lysidious_22
- Track 6 : Gambino_23, Blueberry_23, Azula_23, MissRona_23
- Track 7 : Obliviate_20, ZiggyZoo_20
- Track 8 : CarolAnn_21, Blino_21
- Track 9 : PhrostedPhlake_23
- Track 10 : Murp_22, CheeseSpider_25
- Track 11 : JuJu_21
- Track 12 : KappaFarmDelta_22
- Track 13 : Walrus_23
- Track 14 : William_21
- Track 15 : Angelique_23
- Track 16 : Jablanski_24, Pytheas_24
- Track 17 : Posh_24, Wrigley_24
- Track 18 : ThankyouJordi_20, WelcomeAyanna_20
- Track 19 : Madeline_21, Bosnia_21, Madavieve_21, TimTam_21, Nymphadora_21, Hugley_21, Zirinka_21, Herod_21, Ohgeesy_21, Eviarto_21, BatStarr_21
- Track 20 : Suscepit_22, Eudoria_22, Tayonia_22, Maridalia_21, Trumpet_22, Neobush_22, Antonio_22, Zameen_22, Manasvini_22, Kita_22
- Track 21 : Bialota_21
- Track 22 : Agueybana_21
- Track 23 : BaxterFox_20, PantheRoc_21, Yeezy_22
- Track 24 : Sidious_21
- Track 25 : Malisha_24, Squiddly_25, Spooky_23
- Track 26 : Kamaru_23, Whitney_24, Holliday_23, Budski_23
- Track 27 : ArchiDore_25
- Track 28 : Ruthy_25
- Track 29 : Malibo_23

Summary of Final Annotations (See graph section above for start numbers):

The start number called the most often in the published annotations is 15, it was called in 78 of the 78 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Agueybana_21, Angelique_23, Antonio_22, ArchiDore_25, Archis_22, Azula_23, Barco_21, BatStarr_21, BaxterFox_20, Bialota_21, BlingBling_21, Blino_21, Blueberry_23, Bosnia_21, Budski_23, CaptainKirk2_21, CarolAnn_21, CheeseSpider_25, Delian_21, Eudoria_22, Eviarto_21, Fenry_20, Frokostdame_21, Gambino_23, Guacamole_21, Herod_21, Hitter_21, Holliday_23, Hugley_21, Jablanski_24, Jalammah_23, JasperJr_21, JuJu_21, Kamaru_23, KappaFarmDelta_22, Kita_22, Lysidious_22, Madavieve_21, Madeline_21, Malibo_23, Malisha_24, Manasvini_22, Maridalia_21, Melba_21, Mellie_20, MintFen_21, MissRona_23, Murp_22, Neobush_22, Nymphadora_21, Obliviate_20, Ohgeesy_21, PCoral7_22, PantheRoc_21, PhrostedPhlake_23, Pipp_21, Posh_24, Pytheas_24, Ruthy_25, Samba_21, Sidious_21, Spooky_23, Squiddly_25, Suscepit_22, Tayonia_22, ThankyouJordi_20, TimTam_21, Toast_22, Trumpet_22, UmaThurman_21, Utz_21, Walrus_23, WelcomeAyanna_20, Whitney_24, William_21, Wisp_20, Wrigley_24, Yeezy_22, Zameen_22, Zarbodnamra_21, ZiggyZoo_20, Zilla_21, Zirinka_21,

Genes that have the "Most Annotated" start but do not call it:

-

Genes that do not have the "Most Annotated" start:

-

Summary by start number:

Start 15:

- Found in 83 of 83 (100.0%) of genes in pham
- Manual Annotations of this start: 78 of 78
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Agueybana_21 (CZ1), Angelique_23 (CY1), Antonio_22 (CZ1), ArchiDore_25 (DW), Archis_22 (CV), Azula_23 (CV), Barco_21 (CV), BatStarr_21 (CZ1), BaxterFox_20 (CZ3), Bialota_21 (CZ1), BlingBling_21 (CV), Blino_21 (CV), Blueberry_23 (CV), Bosnia_21 (CZ1), Budski_23 (DN), CaptainKirk2_21 (CV), CarolAnn_21 (CV), CheeseSpider_25 (CV), Delian_21 (CV), Eudoria_22 (CZ1), Eviarto_21 (CZ1), Fenry_20 (CV), Frokostdame_21 (CV), Gambino_23 (CV), Guacamole_21 (CV), Herod_21 (CZ1), Hitter_21 (CV), Holliday_23 (DN1), Hugley_21 (CZ1), Jablanski_24 (CY3), Jalammah_23 (CV), JasperJr_21 (CV), JuJu_21 (CV), Kamaru_23 (DN1), KappaFarmDelta_22 (CV), Kita_22 (CZ1), Lysidious_22 (CV), Madavieve_21 (CZ1), Madeline_21 (CZ1), Malibo_23 (DW), Malisha_24 (DN), Manasvini_22 (CZ1), Maridalia_21 (CZ1), Melba_21 (CV), Mellie_20 (CV), MintFen_21 (CV), MissRona_23 (CV), Murp_22 (CV), Neobush_22 (CZ1), Nymphadora_21 (CZ1), Obliviate_20 (CV), Ohgeesy_21 (CZ), PCoral7_22 (CV), PantheRoc_21 (CZ3), PhrostedPhlake_23 (CV), Pipp_21 (CV), Posh_24 (CY4), Pytheas_24 (CY3), Ruthy_25 (DW), Samba_21 (CV), Sidious_21 (CZ7), Spooky_23 (DN2), Squiddly_25 (DN2), Suscepit_22 (CZ1), Tayonia_22 (CZ1), ThankyouJordi_20 (CZ1), TimTam_21 (CZ1), Toast_22 (CV), Trumpet_22 (CZ1), UmaThurman_21 (CV), Utz_21 (CV), Walrus_23 (CV), WelcomeAyanna_20 (CZ1), Whitney_24 (DN1), William_21 (CV), Wisp_20 (CV), Wrigley_24 (CY4), Yeezy_22 (CZ3), Zameen_22 (CZ1), Zarbodnamra_21 (CV),

ZiggyZoo_20 (CV), Zilla_21 (CV), Zirinka_21 (CZ1),

Summary by clusters:

There are 12 clusters represented in this pham: DN, CY3, CY1, CY4, CZ3, CZ1, CZ7, CZ, DN1, DN2, DW, CV,

Info for manual annotations of cluster CV:

- Start number 15 was manually annotated 36 times for cluster CV.

Info for manual annotations of cluster CY1:

- Start number 15 was manually annotated 1 time for cluster CY1.

Info for manual annotations of cluster CY3:

- Start number 15 was manually annotated 2 times for cluster CY3.

Info for manual annotations of cluster CY4:

- Start number 15 was manually annotated 2 times for cluster CY4.

Info for manual annotations of cluster CZ:

- Start number 15 was manually annotated 1 time for cluster CZ.

Info for manual annotations of cluster CZ1:

- Start number 15 was manually annotated 22 times for cluster CZ1.

Info for manual annotations of cluster CZ3:

- Start number 15 was manually annotated 3 times for cluster CZ3.

Info for manual annotations of cluster CZ7:

- Start number 15 was manually annotated 1 time for cluster CZ7.

Info for manual annotations of cluster DN:

- Start number 15 was manually annotated 2 times for cluster DN.

Info for manual annotations of cluster DN1:

- Start number 15 was manually annotated 3 times for cluster DN1.

Info for manual annotations of cluster DN2:

- Start number 15 was manually annotated 2 times for cluster DN2.

Info for manual annotations of cluster DW:

- Start number 15 was manually annotated 3 times for cluster DW.

Gene Information:

Gene: Agueybana_21 Start: 20174, Stop: 21085, Start Num: 15

Candidate Starts for Agueybana_21:

(1, 19433), (2, 19514), (3, 19523), (4, 19538), (5, 19610), (6, 19676), (7, 19754), (10, 20066), (Start: 15 @20174 has 78 MA's), (18, 20240), (19, 20297), (24, 20435), (25, 20441), (26, 20450), (28, 20543), (29, 20558), (31, 20615), (32, 20627), (34, 20702), (36, 20795), (38, 20813), (41, 21053),

Gene: Angelique_23 Start: 20524, Stop: 21435, Start Num: 15

Candidate Starts for Angelique_23:

(10, 20413), (Start: 15 @20524 has 78 MA's), (17, 20566), (18, 20590), (23, 20752), (24, 20785), (25, 20791), (29, 20908), (32, 20977), (33, 20992), (34, 21052), (36, 21145), (37, 21157), (41, 21403),

Gene: Antonio_22 Start: 20294, Stop: 21205, Start Num: 15

Candidate Starts for Antonio_22:

(11, 20198), (Start: 15 @20294 has 78 MA's), (18, 20360), (20, 20429), (22, 20519), (24, 20555), (25, 20561), (26, 20570), (28, 20663), (29, 20678), (31, 20735), (32, 20747), (34, 20822), (36, 20915), (41, 21173),

Gene: ArchiDore_25 Start: 22305, Stop: 23216, Start Num: 15

Candidate Starts for ArchiDore_25:

(6, 21804), (10, 22194), (12, 22233), (Start: 15 @22305 has 78 MA's), (18, 22371), (22, 22530), (24, 22566), (25, 22572), (27, 22662), (29, 22689), (32, 22758), (34, 22833), (36, 22926), (41, 23184),

Gene: Archis_22 Start: 19231, Stop: 20142, Start Num: 15

Candidate Starts for Archis_22:

(Start: 15 @19231 has 78 MA's), (18, 19297), (22, 19456), (24, 19492), (25, 19498), (29, 19615), (32, 19684), (34, 19759), (36, 19852), (37, 19864), (41, 20110),

Gene: Azula_23 Start: 19335, Stop: 20246, Start Num: 15

Candidate Starts for Azula_23:

(Start: 15 @19335 has 78 MA's), (18, 19401), (21, 19503), (22, 19560), (24, 19596), (25, 19602), (29, 19719), (32, 19788), (34, 19863), (36, 19956), (41, 20214),

Gene: Barco_21 Start: 19020, Stop: 19931, Start Num: 15

Candidate Starts for Barco_21:

(Start: 15 @19020 has 78 MA's), (18, 19086), (22, 19245), (24, 19281), (25, 19287), (29, 19404), (32, 19473), (34, 19548), (36, 19641), (37, 19653), (41, 19899),

Gene: BatStarr_21 Start: 20161, Stop: 21072, Start Num: 15

Candidate Starts for BatStarr_21:

(10, 20053), (Start: 15 @20161 has 78 MA's), (18, 20227), (19, 20284), (24, 20422), (25, 20428), (26, 20437), (28, 20530), (29, 20545), (31, 20602), (32, 20614), (34, 20689), (36, 20782), (41, 21040),

Gene: BaxterFox_20 Start: 19500, Stop: 20411, Start Num: 15

Candidate Starts for BaxterFox_20:

(2, 18840), (3, 18849), (4, 18864), (5, 18936), (6, 19002), (7, 19080), (10, 19392), (Start: 15 @19500 has 78 MA's), (18, 19566), (19, 19623), (24, 19761), (25, 19767), (26, 19776), (28, 19869), (29, 19884), (31, 19941), (32, 19953), (34, 20028), (36, 20121), (41, 20379),

Gene: Bialota_21 Start: 20173, Stop: 21084, Start Num: 15

Candidate Starts for Bialota_21:

(10, 20065), (Start: 15 @20173 has 78 MA's), (18, 20239), (19, 20296), (24, 20434), (25, 20440), (26, 20449), (28, 20542), (29, 20557), (31, 20614), (34, 20701), (36, 20794), (41, 21052),

Gene: BlingBling_21 Start: 19020, Stop: 19931, Start Num: 15

Candidate Starts for BlingBling_21:

(Start: 15 @19020 has 78 MA's), (18, 19086), (22, 19245), (24, 19281), (25, 19287), (29, 19404), (32, 19473), (34, 19548), (36, 19641), (37, 19653), (41, 19899),

Gene: Blino_21 Start: 18988, Stop: 19899, Start Num: 15

Candidate Starts for Blino_21:

(Start: 15 @18988 has 78 MA's), (18, 19054), (24, 19249), (25, 19255), (29, 19372), (32, 19441), (34, 19516), (36, 19609), (37, 19621), (41, 19867),

Gene: Blueberry_23 Start: 19335, Stop: 20246, Start Num: 15

Candidate Starts for Blueberry_23:

(Start: 15 @19335 has 78 MA's), (18, 19401), (21, 19503), (22, 19560), (24, 19596), (25, 19602), (29, 19719), (32, 19788), (34, 19863), (36, 19956), (41, 20214),

Gene: Bosnia_21 Start: 20161, Stop: 21072, Start Num: 15

Candidate Starts for Bosnia_21:

(10, 20053), (Start: 15 @20161 has 78 MA's), (18, 20227), (19, 20284), (24, 20422), (25, 20428), (26, 20437), (28, 20530), (29, 20545), (31, 20602), (32, 20614), (34, 20689), (36, 20782), (41, 21040),

Gene: Budski_23 Start: 19385, Stop: 20299, Start Num: 15

Candidate Starts for Budski_23:

(Start: 15 @19385 has 78 MA's), (18, 19451), (22, 19610), (24, 19646), (25, 19652), (27, 19742), (29, 19769), (32, 19838), (34, 19913), (36, 20006), (39, 20075), (41, 20267),

Gene: CaptainKirk2_21 Start: 19041, Stop: 19952, Start Num: 15

Candidate Starts for CaptainKirk2_21:

(Start: 15 @19041 has 78 MA's), (18, 19107), (22, 19266), (24, 19302), (25, 19308), (29, 19425), (32, 19494), (34, 19569), (36, 19662), (41, 19920),

Gene: CarolAnn_21 Start: 18987, Stop: 19898, Start Num: 15

Candidate Starts for CarolAnn_21:

(Start: 15 @18987 has 78 MA's), (18, 19053), (24, 19248), (25, 19254), (29, 19371), (32, 19440), (34, 19515), (36, 19608), (37, 19620), (41, 19866),

Gene: CheeseSpider_25 Start: 19586, Stop: 20497, Start Num: 15

Candidate Starts for CheeseSpider_25:

(Start: 15 @19586 has 78 MA's), (16, 19625), (18, 19652), (22, 19811), (24, 19847), (25, 19853), (27, 19943), (29, 19970), (34, 20114), (36, 20207), (41, 20465),

Gene: Delian_21 Start: 19041, Stop: 19952, Start Num: 15

Candidate Starts for Delian_21:

(Start: 15 @19041 has 78 MA's), (18, 19107), (22, 19266), (24, 19302), (25, 19308), (29, 19425), (32, 19494), (34, 19569), (36, 19662), (41, 19920),

Gene: Eudoria_22 Start: 20294, Stop: 21205, Start Num: 15

Candidate Starts for Eudoria_22:

(11, 20198), (Start: 15 @20294 has 78 MA's), (18, 20360), (20, 20429), (22, 20519), (24, 20555), (25, 20561), (26, 20570), (28, 20663), (29, 20678), (31, 20735), (32, 20747), (34, 20822), (36, 20915), (41, 21173),

Gene: Eviarto_21 Start: 20161, Stop: 21072, Start Num: 15

Candidate Starts for Eviarto_21:

(10, 20053), (Start: 15 @20161 has 78 MA's), (18, 20227), (19, 20284), (24, 20422), (25, 20428), (26, 20437), (28, 20530), (29, 20545), (31, 20602), (32, 20614), (34, 20689), (36, 20782), (41, 21040),

Gene: Fenry_20 Start: 18739, Stop: 19650, Start Num: 15

Candidate Starts for Fenry_20:

(Start: 15 @18739 has 78 MA's), (18, 18805), (24, 19000), (25, 19006), (29, 19123), (32, 19192), (34, 19267), (36, 19360), (41, 19618),

Gene: Frokostdame_21 Start: 18989, Stop: 19900, Start Num: 15

Candidate Starts for Frokostdame_21:

(Start: 15 @18989 has 78 MA's), (18, 19055), (22, 19214), (24, 19250), (25, 19256), (29, 19373), (32, 19442), (34, 19517), (36, 19610), (41, 19868),

Gene: Gambino_23 Start: 19335, Stop: 20246, Start Num: 15

Candidate Starts for Gambino_23:

(Start: 15 @19335 has 78 MA's), (18, 19401), (21, 19503), (22, 19560), (24, 19596), (25, 19602), (29, 19719), (32, 19788), (34, 19863), (36, 19956), (41, 20214),

Gene: Guacamole_21 Start: 19024, Stop: 19935, Start Num: 15

Candidate Starts for Guacamole_21:

(Start: 15 @19024 has 78 MA's), (18, 19090), (22, 19249), (24, 19285), (25, 19291), (29, 19408), (32, 19477), (34, 19552), (36, 19645), (37, 19657), (41, 19903),

Gene: Herod_21 Start: 20161, Stop: 21072, Start Num: 15

Candidate Starts for Herod_21:

(10, 20053), (Start: 15 @20161 has 78 MA's), (18, 20227), (19, 20284), (24, 20422), (25, 20428), (26, 20437), (28, 20530), (29, 20545), (31, 20602), (32, 20614), (34, 20689), (36, 20782), (41, 21040),

Gene: Hitter_21 Start: 19020, Stop: 19931, Start Num: 15

Candidate Starts for Hitter_21:

(Start: 15 @19020 has 78 MA's), (18, 19086), (22, 19245), (24, 19281), (25, 19287), (29, 19404), (32, 19473), (34, 19548), (36, 19641), (41, 19899),

Gene: Holliday_23 Start: 19385, Stop: 20299, Start Num: 15

Candidate Starts for Holliday_23:

(Start: 15 @19385 has 78 MA's), (18, 19451), (22, 19610), (24, 19646), (25, 19652), (27, 19742), (29, 19769), (32, 19838), (34, 19913), (36, 20006), (39, 20075), (41, 20267),

Gene: Hugley_21 Start: 20161, Stop: 21072, Start Num: 15

Candidate Starts for Hugley_21:

(10, 20053), (Start: 15 @20161 has 78 MA's), (18, 20227), (19, 20284), (24, 20422), (25, 20428), (26, 20437), (28, 20530), (29, 20545), (31, 20602), (32, 20614), (34, 20689), (36, 20782), (41, 21040),

Gene: Jablanski_24 Start: 20700, Stop: 21611, Start Num: 15

Candidate Starts for Jablanski_24:

(Start: 15 @20700 has 78 MA's), (18, 20766), (22, 20925), (23, 20928), (24, 20961), (25, 20967), (29, 21084), (32, 21153), (34, 21228), (36, 21321), (41, 21579),

Gene: Jalamah_23 Start: 19814, Stop: 20725, Start Num: 15

Candidate Starts for Jalamah_23:

(Start: 15 @19814 has 78 MA's), (18, 19880), (22, 20039), (24, 20075), (25, 20081), (29, 20198), (32, 20267), (34, 20342), (36, 20435), (41, 20693),

Gene: JasperJr_21 Start: 19024, Stop: 19935, Start Num: 15

Candidate Starts for JasperJr_21:

(Start: 15 @19024 has 78 MA's), (18, 19090), (22, 19249), (24, 19285), (25, 19291), (29, 19408), (32, 19477), (34, 19552), (36, 19645), (37, 19657), (41, 19903),

Gene: JuJu_21 Start: 18942, Stop: 19853, Start Num: 15

Candidate Starts for JuJu_21:

(2, 18282), (3, 18291), (4, 18306), (5, 18378), (6, 18444), (10, 18834), (12, 18873), (Start: 15 @18942 has 78 MA's), (18, 19008), (22, 19167), (23, 19170), (24, 19203), (25, 19209), (27, 19299), (29, 19326), (32, 19395), (34, 19470), (36, 19563), (41, 19821),

Gene: Kamaru_23 Start: 19385, Stop: 20299, Start Num: 15

Candidate Starts for Kamaru_23:

(Start: 15 @19385 has 78 MA's), (18, 19451), (22, 19610), (24, 19646), (25, 19652), (27, 19742), (29, 19769), (32, 19838), (34, 19913), (36, 20006), (39, 20075), (41, 20267),

Gene: KappaFarmDelta_22 Start: 19388, Stop: 20299, Start Num: 15

Candidate Starts for KappaFarmDelta_22:

(Start: 15 @19388 has 78 MA's), (16, 19427), (17, 19430), (18, 19454), (22, 19613), (24, 19649), (25, 19655), (27, 19745), (29, 19772), (34, 19916), (36, 20009), (39, 20075), (41, 20267),

Gene: Kita_22 Start: 20294, Stop: 21205, Start Num: 15

Candidate Starts for Kita_22:

(11, 20198), (Start: 15 @20294 has 78 MA's), (18, 20360), (20, 20429), (22, 20519), (24, 20555), (25, 20561), (26, 20570), (28, 20663), (29, 20678), (31, 20735), (32, 20747), (34, 20822), (36, 20915), (41, 21173),

Gene: Lysidious_22 Start: 19544, Stop: 20455, Start Num: 15

Candidate Starts for Lysidious_22:

(Start: 15 @19544 has 78 MA's), (18, 19610), (22, 19769), (24, 19805), (25, 19811), (29, 19928), (32, 19997), (34, 20072), (36, 20165), (41, 20423),

Gene: Madavieve_21 Start: 20441, Stop: 21352, Start Num: 15

Candidate Starts for Madavieve_21:

(10, 20333), (Start: 15 @20441 has 78 MA's), (18, 20507), (19, 20564), (24, 20702), (25, 20708), (26, 20717), (28, 20810), (29, 20825), (31, 20882), (32, 20894), (34, 20969), (36, 21062), (41, 21320),

Gene: Madeline_21 Start: 20459, Stop: 21370, Start Num: 15

Candidate Starts for Madeline_21:

(10, 20351), (Start: 15 @20459 has 78 MA's), (18, 20525), (19, 20582), (24, 20720), (25, 20726), (26, 20735), (28, 20828), (29, 20843), (31, 20900), (32, 20912), (34, 20987), (36, 21080), (41, 21338),

Gene: Malibo_23 Start: 19343, Stop: 20254, Start Num: 15

Candidate Starts for Malibo_23:

(Start: 15 @19343 has 78 MA's), (18, 19409), (24, 19604), (25, 19610), (29, 19727), (32, 19796), (33, 19811), (34, 19871), (36, 19964), (41, 20222),

Gene: Malisha_24 Start: 21166, Stop: 22080, Start Num: 15

Candidate Starts for Malisha_24:

(Start: 15 @21166 has 78 MA's), (18, 21232), (20, 21301), (22, 21391), (24, 21427), (25, 21433), (27, 21523), (29, 21550), (32, 21619), (34, 21694), (36, 21787), (39, 21856), (41, 22048),

Gene: Manasvini_22 Start: 20294, Stop: 21205, Start Num: 15

Candidate Starts for Manasvini_22:

(11, 20198), (Start: 15 @20294 has 78 MA's), (18, 20360), (20, 20429), (22, 20519), (24, 20555), (25, 20561), (26, 20570), (28, 20663), (29, 20678), (31, 20735), (32, 20747), (34, 20822), (36, 20915), (41, 21173),

Gene: Maridalia_21 Start: 20294, Stop: 21205, Start Num: 15

Candidate Starts for Maridalia_21:

(11, 20198), (Start: 15 @20294 has 78 MA's), (18, 20360), (20, 20429), (22, 20519), (24, 20555), (25, 20561), (26, 20570), (28, 20663), (29, 20678), (31, 20735), (32, 20747), (34, 20822), (36, 20915), (41, 21173),

Gene: Melba_21 Start: 19020, Stop: 19931, Start Num: 15

Candidate Starts for Melba_21:

(Start: 15 @19020 has 78 MA's), (18, 19086), (22, 19245), (24, 19281), (25, 19287), (29, 19404), (32, 19473), (34, 19548), (36, 19641), (37, 19653), (41, 19899),

Gene: Mellie_20 Start: 18781, Stop: 19692, Start Num: 15

Candidate Starts for Mellie_20:

(Start: 15 @18781 has 78 MA's), (18, 18847), (22, 19006), (24, 19042), (25, 19048), (29, 19165), (32, 19234), (34, 19309), (36, 19402), (41, 19660),

Gene: MintFen_21 Start: 19020, Stop: 19931, Start Num: 15

Candidate Starts for MintFen_21:

(Start: 15 @19020 has 78 MA's), (18, 19086), (22, 19245), (24, 19281), (25, 19287), (29, 19404), (32, 19473), (34, 19548), (36, 19641), (37, 19653), (41, 19899),

Gene: MissRona_23 Start: 19335, Stop: 20246, Start Num: 15

Candidate Starts for MissRona_23:

(Start: 15 @19335 has 78 MA's), (18, 19401), (21, 19503), (22, 19560), (24, 19596), (25, 19602), (29, 19719), (32, 19788), (34, 19863), (36, 19956), (41, 20214),

Gene: Murp_22 Start: 19288, Stop: 20199, Start Num: 15

Candidate Starts for Murp_22:

(Start: 15 @19288 has 78 MA's), (16, 19327), (18, 19354), (22, 19513), (24, 19549), (25, 19555), (27, 19645), (29, 19672), (34, 19816), (36, 19909), (41, 20167),

Gene: Neobush_22 Start: 20294, Stop: 21205, Start Num: 15

Candidate Starts for Neobush_22:

(11, 20198), (Start: 15 @20294 has 78 MA's), (18, 20360), (20, 20429), (22, 20519), (24, 20555), (25, 20561), (26, 20570), (28, 20663), (29, 20678), (31, 20735), (32, 20747), (34, 20822), (36, 20915), (41, 21173),

Gene: Nymphadora_21 Start: 20161, Stop: 21072, Start Num: 15

Candidate Starts for Nymphadora_21:

(10, 20053), (Start: 15 @20161 has 78 MA's), (18, 20227), (19, 20284), (24, 20422), (25, 20428), (26, 20437), (28, 20530), (29, 20545), (31, 20602), (32, 20614), (34, 20689), (36, 20782), (41, 21040),

Gene: Obliviate_20 Start: 18810, Stop: 19721, Start Num: 15

Candidate Starts for Obliviate_20:

(Start: 15 @18810 has 78 MA's), (18, 18876), (22, 19035), (24, 19071), (25, 19077), (29, 19194), (32, 19263), (34, 19338), (36, 19431), (40, 19539), (41, 19689),

Gene: Ohgeesy_21 Start: 19784, Stop: 20695, Start Num: 15

Candidate Starts for Ohgeesy_21:

(10, 19676), (Start: 15 @19784 has 78 MA's), (18, 19850), (19, 19907), (24, 20045), (25, 20051), (26, 20060), (28, 20153), (29, 20168), (31, 20225), (32, 20237), (34, 20312), (36, 20405), (41, 20663),

Gene: PCoral7_22 Start: 19309, Stop: 20226, Start Num: 15

Candidate Starts for PCoral7_22:

(Start: 15 @19309 has 78 MA's), (18, 19375), (24, 19570), (25, 19576), (30, 19723), (32, 19759), (34, 19834), (36, 19930),

Gene: PantheRoc_21 Start: 19492, Stop: 20403, Start Num: 15

Candidate Starts for PantheRoc_21:

(2, 18832), (3, 18841), (4, 18856), (5, 18928), (6, 18994), (7, 19072), (10, 19384), (Start: 15 @19492 has 78 MA's), (18, 19558), (19, 19615), (24, 19753), (25, 19759), (26, 19768), (28, 19861), (29, 19876), (31, 19933), (32, 19945), (34, 20020), (36, 20113), (41, 20371),

Gene: PhrostedPhlake_23 Start: 19713, Stop: 20624, Start Num: 15

Candidate Starts for PhrostedPhlake_23:

(10, 19599), (13, 19656), (14, 19698), (Start: 15 @19713 has 78 MA's), (18, 19779), (22, 19938), (24, 19974), (25, 19980), (29, 20097), (32, 20166), (34, 20241), (36, 20334), (41, 20592),

Gene: Pipp_21 Start: 19014, Stop: 19925, Start Num: 15

Candidate Starts for Pipp_21:

(Start: 15 @19014 has 78 MA's), (18, 19080), (22, 19239), (24, 19275), (25, 19281), (29, 19398), (32, 19467), (34, 19542), (36, 19635), (41, 19893),

Gene: Posh_24 Start: 20553, Stop: 21464, Start Num: 15

Candidate Starts for Posh_24:

(Start: 15 @20553 has 78 MA's), (18, 20619), (22, 20778), (23, 20781), (24, 20814), (25, 20820), (29, 20937), (34, 21081), (36, 21174), (41, 21432),

Gene: Pytheas_24 Start: 20699, Stop: 21610, Start Num: 15

Candidate Starts for Pytheas_24:

(Start: 15 @20699 has 78 MA's), (18, 20765), (22, 20924), (23, 20927), (24, 20960), (25, 20966), (29, 21083), (32, 21152), (34, 21227), (36, 21320), (41, 21578),

Gene: Ruthy_25 Start: 22394, Stop: 23305, Start Num: 15

Candidate Starts for Ruthy_25:

(Start: 15 @22394 has 78 MA's), (18, 22460), (24, 22655), (25, 22661), (27, 22751), (29, 22778), (32, 22847), (34, 22922), (36, 23015), (41, 23273),

Gene: Samba_21 Start: 19098, Stop: 20009, Start Num: 15

Candidate Starts for Samba_21:

(Start: 15 @19098 has 78 MA's), (18, 19164), (22, 19323), (24, 19359), (25, 19365), (29, 19482), (32, 19551), (34, 19626), (36, 19719), (41, 19977),

Gene: Sidious_21 Start: 19616, Stop: 20527, Start Num: 15

Candidate Starts for Sidious_21:

(10, 19505), (12, 19544), (Start: 15 @19616 has 78 MA's), (18, 19682), (22, 19841), (24, 19877), (25, 19883), (27, 19973), (29, 20000), (32, 20069), (34, 20144), (36, 20237), (41, 20495),

Gene: Spooky_23 Start: 19375, Stop: 20289, Start Num: 15

Candidate Starts for Spooky_23:

(Start: 15 @19375 has 78 MA's), (18, 19441), (20, 19510), (22, 19600), (24, 19636), (25, 19642), (27, 19732), (29, 19759), (32, 19828), (34, 19903), (36, 19996), (39, 20065), (41, 20257),

Gene: Squiddly_25 Start: 20787, Stop: 21701, Start Num: 15

Candidate Starts for Squiddly_25:

(Start: 15 @20787 has 78 MA's), (18, 20853), (20, 20922), (22, 21012), (24, 21048), (25, 21054), (27, 21144), (29, 21171), (32, 21240), (34, 21315), (36, 21408), (39, 21477), (41, 21669),

Gene: Suscepit_22 Start: 20294, Stop: 21205, Start Num: 15

Candidate Starts for Suscepit_22:

(11, 20198), (Start: 15 @20294 has 78 MA's), (18, 20360), (20, 20429), (22, 20519), (24, 20555), (25, 20561), (26, 20570), (28, 20663), (29, 20678), (31, 20735), (32, 20747), (34, 20822), (36, 20915), (41, 21173),

Gene: Tayonia_22 Start: 20294, Stop: 21205, Start Num: 15

Candidate Starts for Tayonia_22:

(11, 20198), (Start: 15 @20294 has 78 MA's), (18, 20360), (20, 20429), (22, 20519), (24, 20555), (25, 20561), (26, 20570), (28, 20663), (29, 20678), (31, 20735), (32, 20747), (34, 20822), (36, 20915), (41, 21173),

Gene: ThankyouJordi_20 Start: 20133, Stop: 21047, Start Num: 15

Candidate Starts for ThankyouJordi_20:

(10, 20022), (Start: 15 @20133 has 78 MA's), (16, 20172), (18, 20199), (24, 20397), (25, 20403), (29, 20520), (34, 20664), (35, 20709), (36, 20757), (41, 21015),

Gene: TimTam_21 Start: 20161, Stop: 21072, Start Num: 15

Candidate Starts for TimTam_21:

(10, 20053), (Start: 15 @20161 has 78 MA's), (18, 20227), (19, 20284), (24, 20422), (25, 20428), (26, 20437), (28, 20530), (29, 20545), (31, 20602), (32, 20614), (34, 20689), (36, 20782), (41, 21040),

Gene: Toast_22 Start: 19309, Stop: 20226, Start Num: 15

Candidate Starts for Toast_22:

(Start: 15 @19309 has 78 MA's), (18, 19375), (24, 19570), (25, 19576), (30, 19723), (32, 19759), (34, 19834), (36, 19930),

Gene: Trumpet_22 Start: 20294, Stop: 21205, Start Num: 15

Candidate Starts for Trumpet_22:

(11, 20198), (Start: 15 @20294 has 78 MA's), (18, 20360), (20, 20429), (22, 20519), (24, 20555), (25, 20561), (26, 20570), (28, 20663), (29, 20678), (31, 20735), (32, 20747), (34, 20822), (36, 20915), (41, 21173),

Gene: UmaThurman_21 Start: 19145, Stop: 20056, Start Num: 15

Candidate Starts for UmaThurman_21:

(Start: 15 @19145 has 78 MA's), (18, 19211), (22, 19370), (24, 19406), (25, 19412), (29, 19529), (32, 19598), (34, 19673), (36, 19766), (41, 20024),

Gene: Utz_21 Start: 19015, Stop: 19926, Start Num: 15

Candidate Starts for Utz_21:

(Start: 15 @19015 has 78 MA's), (18, 19081), (22, 19240), (24, 19276), (25, 19282), (29, 19399), (32, 19468), (34, 19543), (36, 19636), (37, 19648), (41, 19894),

Gene: Walrus_23 Start: 19560, Stop: 20471, Start Num: 15

Candidate Starts for Walrus_23:

(8, 19353), (9, 19362), (10, 19446), (13, 19503), (14, 19545), (Start: 15 @19560 has 78 MA's), (18, 19626), (22, 19785), (24, 19821), (25, 19827), (29, 19944), (32, 20013), (34, 20088), (36, 20181), (41, 20439),

Gene: WelcomeAyanna_20 Start: 20133, Stop: 21047, Start Num: 15

Candidate Starts for WelcomeAyanna_20:

(10, 20022), (Start: 15 @20133 has 78 MA's), (16, 20172), (18, 20199), (24, 20397), (25, 20403), (29, 20520), (34, 20664), (35, 20709), (36, 20757), (41, 21015),

Gene: Whitney_24 Start: 20189, Stop: 21103, Start Num: 15

Candidate Starts for Whitney_24:

(Start: 15 @20189 has 78 MA's), (18, 20255), (22, 20414), (24, 20450), (25, 20456), (27, 20546), (29, 20573), (32, 20642), (34, 20717), (36, 20810), (39, 20879), (41, 21071),

Gene: William_21 Start: 19064, Stop: 19978, Start Num: 15

Candidate Starts for William_21:

(Start: 15 @19064 has 78 MA's), (18, 19130), (21, 19232), (24, 19325), (25, 19331), (32, 19514), (34, 19589), (36, 19682),

Gene: Wisp_20 Start: 18730, Stop: 19641, Start Num: 15

Candidate Starts for Wisp_20:

(Start: 15 @18730 has 78 MA's), (18, 18796), (22, 18955), (24, 18991), (25, 18997), (29, 19114), (32, 19183), (34, 19258), (36, 19351), (41, 19609),

Gene: Wrigley_24 Start: 20450, Stop: 21361, Start Num: 15

Candidate Starts for Wrigley_24:

(Start: 15 @20450 has 78 MA's), (18, 20516), (22, 20675), (23, 20678), (24, 20711), (25, 20717), (29, 20834), (34, 20978), (36, 21071), (41, 21329),

Gene: Yeezy_22 Start: 19516, Stop: 20427, Start Num: 15

Candidate Starts for Yeezy_22:

(2, 18856), (3, 18865), (4, 18880), (5, 18952), (6, 19018), (7, 19096), (10, 19408), (Start: 15 @19516 has 78 MA's), (18, 19582), (19, 19639), (24, 19777), (25, 19783), (26, 19792), (28, 19885), (29, 19900), (31, 19957), (32, 19969), (34, 20044), (36, 20137), (41, 20395),

Gene: Zameen_22 Start: 20294, Stop: 21205, Start Num: 15

Candidate Starts for Zameen_22:

(11, 20198), (Start: 15 @20294 has 78 MA's), (18, 20360), (20, 20429), (22, 20519), (24, 20555), (25, 20561), (26, 20570), (28, 20663), (29, 20678), (31, 20735), (32, 20747), (34, 20822), (36, 20915), (41, 21173),

Gene: Zarbodnamra_21 Start: 19019, Stop: 19930, Start Num: 15

Candidate Starts for Zarbodnamra_21:

(Start: 15 @19019 has 78 MA's), (18, 19085), (22, 19244), (24, 19280), (25, 19286), (29, 19403), (32, 19472), (34, 19547), (36, 19640), (37, 19652), (41, 19898),

Gene: ZiggyZoo_20 Start: 18810, Stop: 19721, Start Num: 15

Candidate Starts for ZiggyZoo_20:

(Start: 15 @18810 has 78 MA's), (18, 18876), (22, 19035), (24, 19071), (25, 19077), (29, 19194), (32, 19263), (34, 19338), (36, 19431), (40, 19539), (41, 19689),

Gene: Zilla_21 Start: 19037, Stop: 19948, Start Num: 15

Candidate Starts for Zilla_21:

(Start: 15 @19037 has 78 MA's), (18, 19103), (22, 19262), (24, 19298), (25, 19304), (29, 19421), (32, 19490), (34, 19565), (36, 19658), (37, 19670), (41, 19916),

Gene: Zirinka_21 Start: 20173, Stop: 21084, Start Num: 15

Candidate Starts for Zirinka_21:

(10, 20065), (Start: 15 @20173 has 78 MA's), (18, 20239), (19, 20296), (24, 20434), (25, 20440), (26, 20449), (28, 20542), (29, 20557), (31, 20614), (32, 20626), (34, 20701), (36, 20794), (41, 21052),